

Perceived Service Quality at Private and Public Higher Education Institutions

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Abstract. The paper examines students' perceptions of the service quality at business higher education institution in Croatia and compares student's ratings from private and public higher education institutions. The service quality in business higher education is crucial issue because of increasing stakeholders' requirements and fierce competition among higher education institutions. Students are primary customers in higher education and their perceptions are the most important for the quality improvement. Therefore, the aim of this paper is to determine how students perceive higher education service quality and to define improvement strategies. Students' perceptions are examined using SERVPERF instrument and results are analysed using principal component analysis to define key dimensions of higher education service quality. Five dimensions were extracted: access, non-academic dimension, reputation, study programs and services, and academic dimension. Moreover, the research explored the impact of control variables on students' perceptions.

Keywords: service quality, student perception, higher education, SERVPERF, quality improvement, Croatia.

1. Introduction

Higher education institutions that provide business programs are facing fierce competition and increased quality requirements. Moreover, there is a shift towards a market orientation among higher education institutions. Gaziel (2012) pointed out that the shift in higher education towards market forces is related to

government attempt to relieve demand pressures and to move from ownership to regulator role. According to Virgiyanti et al. (2011) higher education institutions are applying marketing theories and concepts to gain competitive advantage. Therefore, Bezuidenhout and De Jager (2014) concluded that higher education has become more commercialised.

Croatian higher education is no exception, the competitiveness is more intense and stakeholders are becoming more demanding. In the last two decades the number of higher education institutions in Croatia significantly increased, from 93 before 2000 to 133 in 2010. Most of new higher education institutions were private, although they account for only 25 percent. The number of students also increased from 100,297 to 148,616 (CBS, 2012). The competitiveness in Croatian higher education area is even more intense after the EU accession. Under these circumstances, higher education institutions have to adjust their system according to the stakeholders' requirements and implement strategies for continuous improvement.

Crucial issues in Croatian higher education system are high dropout rates and high percentage of students who don't finish their study in time. For example, the dropout rates were 42 percent before 2010, and 70 percent of those students left their study at first and second year (Farnell, 2010). Moreover, only 5 to 10 percent of students graduate within stipulated timeframe. Leadership and policy makers in Croatian higher education need to communicate with students and find out how to motivate and engage students to retain and finish their studies within stipulated timeframe. In order to do that, they must understand students' needs and requirements and their perceptions about provided service. Accordingly, the aim of this paper is to determine how students perceive quality of the higher education institution they attend and define improvement strategies focused on fulfilling students' needs. Furthermore, the distinction between public and private higher education institutions is highlighted in order to provide more specific guidelines for the management. The distinction is based on the fact that most of the private higher education institutions are relatively new and they provide vocational study programs, while most of the public higher education institutions have long tradition and focus on academic programs.

2. Literature review

Student as customer paradigm

The contemporary higher education systems are changing and becoming more oriented towards students and their results. The vast number of studies

emphasised customer focus as a key determinant of service quality in higher education (Kara and De Shields, 2004; Rønsholdt and Brohus, 2014; Tam, 2002). Sirvanci (2004) pointed out that all quality improvement programs depends on understanding the customers and their needs and requirements. Every higher education institution should establish measures to determine the needs and requirements of their students (Bayraktar et al., 2008). In addition, Chievo Garwe (2015) pointed to the need to continuously engage the student voice as a way of improving the quality of the teaching and learning environment which will result in the improvement of the quality perception towards educational institution.

The concept of students as customers is vague and, therefore, often misinterpreted. Implementation of “student as customer paradigm” can result both with positive and negative consequences regarding the quality of study programs. The results presented by Watjatrakul (2014) state that students believe that adoption of the student-as-customer concept leads to improvement of the institutional service quality. But, at the same time, they believe that it leads to the degradation of educational quality in terms of the instructors’ neglect of teaching, the impairment of instructor-student relationship, and the ease of course achievement. Watjatrakul (2014) concludes that the effect of social influence on students’ intentions to study at institutions which adopt this concept is greater in spite of the negative perception on its long-term outcomes. Students are not traditional customers who pay for the service and receive the qualification (i.e. degree). However, they pay increasing amount of the education costs and should be treated as customers (Kanji and Tambi, 1999). Rosh White (2007) indicates the difference between the customers and clients. Students are not customers, but they can be clients. Customers require satisfying service without his participation in the service delivery process, while clients actively participate in the process. In the same vein, Duque and Weeks (2010) pointed out that students have active role in the education process because their results depend on their efficient participation and involvement. For example, Petruzzellis et al. (2006) emphasized differences in needs between working and non-working students because the level of engagement is much lower for working students.

In this study, students are seen from the new marketing perspective, according to which they have two roles. In the first role, students are customers who receive service that should fulfil their needs and requirements. The second role includes their active participation and involvement in the education process, because their results depend on the level of their own engagement (Dužević,

2015).

Measuring service quality in higher education

In the higher education, quality is usually analysed using customer's perceptions based on their overall experience (Aldridge and Rowley, 1998). The most popular instrument for measuring service quality is SERVQUAL. Numerous studies have used the SERVQUAL for evaluating quality service in higher education (Snipes and Thompson, 1999; Marković, 2006; Sahney et al., 2008, 2010; Barone and Franco, 2009; Nadiri et al., 2009; Chatterjee et al., 2009; Qureshi et al., 2010). Parasuraman developed this instrument for measuring the gap between customer's expectations and perceptions (Parasuraman et al., 1985).

Unsolved issue of expectation as the determinant of the perceived quality service resulted in two different paradigms of quality: disconfirmation paradigm (SERVQUAL) and perception paradigm (SERVPERF). Both instruments share the same concept but SERVPERF measures only the customer's perceptions, according to the same items included in the SERVQUAL instrument. Cronin and Taylor (1992) and Brady et al. (2002) found that performance measurements better predict service quality than the gap between expectations and perceptions. They argued that expectations are already included in the perceptions and there is no need to measure expectations. The researches have confirmed that SERVPERF instrument is a better predictor in higher education context (Firdaus, 2006; Sultan and Wong, 2010).

Firdaus (2006) developed instrument for measuring quality service: HEdPERF (higher education performance). HEdPERF consists of 41 items, of which 13 items were taken from SERVPERF, and the remaining 28 were developed from literature overview. HEdPERF was proven to be the best indicator, explaining higher variances, is a more reliable predictor and shows better criteria of construct's validity (Firdaus, 2006). The instrument consists of five aspects of service quality: (1) non-academic aspects that consists of items which are crucial for ensuring that students fulfil their obligations and is linked to obligations of non-academic staff, (2) academic aspects include items related to the responsibility of the academic staff, (3) reputation consist of items which suggest the importance of the higher education institution in projecting a professional image, (4) access that include items which relate to such issues as approachability, ease of contact, availability and convenience, and (5) study programs that emphasizes the importance of offering wide ranging and reputable academic programs with flexible structure and syllabus. Other studies have also found that service quality attributes include: academic aspects, non-academic aspects, accessibility, and reputation (Brocado, 2009; Lazibat et al.,

2014; Sultan and Wong, 2010).

Service quality at private and public higher education institutions

The literature suggests that service quality at private and public higher education institutions is different (Calvo-Porrall et al., 2013; Cao and Li, 2014; Khaldi and Khatib, 2014; Mukhtar et al., 2014; Singh Tomar, 2014; Umbach and Wawrzynski, 2005). According to Umbach and Wawrzynski (2005), private higher education institutions stimulate students and achieve better interactions with students than public institutions. According to Singh Tomar (2014) students at private higher education institutions have higher expectations than students from public institutions.

Moreover, Deng (1997) pointed out the issues of inadequate planning and limited resources at private higher education institutions. Private higher education institutions often focus on generating revenues and maximize enrolment rates without considering their capacities (Ozturgut, 2011). In the same vein, Cao and Li (2014) found that infrastructure in many private higher education institutions is not good enough to support professional development and vocational training for instructors, practitioners and administrators. Sandberg Hansen and Solvoll (2015) also found that facilities at the higher education institutions have a strong influence on student satisfaction. However, regarding students' perceptions private higher education institutions are often accessed better than public institutions (Mukhtar et al., 2015). According to Calvo-Porrall et al. (2013) private higher education institutions has a better evaluation for most of the perceived quality dimensions. The students of the private center showed a significant higher evaluation in reliability, responsiveness, assurance and empathy dimensions.

3. Methodology and results

The HEDPERF instrument was used to collect data about customer perceptions of service quality in the Croatian higher education system. The HEDPERF instrument was used because several studies proved its superiority over the other instruments in the higher education context (Brocado 2009; Firdaus 2006, Ali et al. 2016). Likert scale ranging from one (strongly disagree) to seven (strongly agree) was used. The questionnaire applied in this study was tested for internal consistency using Cronbach's alpha coefficient based on standardised items reported the rate higher than 0.7. The data were collected using on-line questionnaires for students from May to October 2012. In total, 387 student replies were collected from higher education institutions that provide study business study programs in Croatia. Of the 387 students, 288 were females and

99 were males. Most of the students were full-time students (313). Based on the enrolled study programs, 181 students were enrolled to the university study programs and 206 students to the vocational study programs. Regarding institutional type, 259 students were from public higher education institutions and 107 from private institutions.

A Principal Components Analysis (PCA) of the items from the HEdPERF instrument was implemented to define key factors of higher education quality service from student perspective. The suitability of the collected data for factor analysis was checked prior to implementing PCA. After inspecting the correlation matrix, we found the existence of a large number of coefficients with a correlation coefficient of 0.3 or above. The Kaiser-Meyer-Olkin criteria, with value of 0.954, and Bartlett's test, which was shown to have a statistical significance of 1%, supports the suitability of factor analysis for the data collected through the survey.

Main components' analysis established existence of 7 factors with characteristic values above 1. Given that the previous research from this area suggests a solution with five factors (Firdaus, 2006), Scree diagram was additionally checked, which suggests using just five factors, which was additionally confirmed by implementing a Parallel Analysis. The solution with five factors has explained 61.20% of total variable. Factors which were extracted in the analysis are: (1) access which relates to service' approachability and reliability, (2) non-academic with items related to accountability of non-academic staff, (3) study programs and services, (4) reputation of a higher education institution and (5) academic which includes the accountability of the academic staff (for more detail, please see Appendix 1).

To analyze the impact of control variables (gender, ownership status, enrolled study program type, student status) on student perceptions of higher education service quality, independent samples t-tests of the mean difference between two populations were implemented.

The results revealed that students perceive academic dimension to be the most satisfying attribute, followed by reputation and access. In order to compare the perceptions of female and male students on the five service quality dimensions, independent samples t-tests were implemented on the mean difference of two populations. The results for the table 1 suggest that there is statistically significant difference in perceptions only for the non-academic dimension of service quality. Furthermore, analysis of students' perceptions of the higher education service quality according to students' status (full-time or part-time students), showed no statistically significant differences in the

analysed groups for all service quality dimensions.

Table 1. Perceived service quality dimensions total and according to gender structure

| Service dimension | quality | Total | Females | Males | t- test statistics |
|-----------------------------|---------|----------------|----------------|----------------|--------------------|
| | | N=387 | N=288 | N=99 | |
| Access | | 5.12 (1,16) | 5.12 [1.14] | 5.14 [1.19] | 0.183 |
| Non-academic dimension | | 4.60 (1.53) | 4.47 [1.54] | 4.96 [1.45] | 2.751*** |
| Study programs and services | | 4.33 (1.21) | 4.31 [1.19] | 4.42 [1.26] | 0.783 |
| Reputation | | 5.26 (1.08) | 5.27 [1.02] | 5.25 [1.25] | -0.136 |
| Academic dimension | | 5.33 (1.03) | 5.34 [1.14] | 5.29 [0.99] | -0.447 |

Note: () denotes standard deviation; [] denotes standard error of estimate. asterix *** denote significance level of 1%

Table 2. Perceived service quality dimensions according to student's status at the higher education institution

| Service dimension | quality | Full-time student | Part-time student | t- test statistics |
|-----------------------------|---------|-------------------|-------------------|--------------------|
| | | N=313 | N=74 | |
| Access | | 5.14 [1.18] | 5.06 [1.06] | 0.503 |
| Non-academic dimension | | 4.57 [1.54] | 4.73 [1.48] | -0.840 |
| Study programs and services | | 4.34 [1.22] | 4.31 [1.17] | 0.151 |
| Reputation | | 5.27 [1.10] | 5.25 [0.98] | 0.140 |
| Academic dimension | | 5.34 [1.06] | 5.27 [0.91] | 0.508 |

Note: [] denotes standard error of estimate.

According to the type of enrolled study program and higher education

institution's ownership status, the results revealed statistically significant differences for all service quality dimensions, except for reputation when type of enrolled study program was considered. The results of the implemented tests are statistically significant at the level of 1%, except for the academic dimension where significance was 5%.

Table 3. Perceived service quality dimensions according to the type of enrolled study program

| Service dimension quality | Vocational study program | University study program | t- test statistics |
|-----------------------------|--------------------------|--------------------------|--------------------|
| | N=206 | N=181 | |
| Access | 5.30 [1.21] | 4.91 [1.06] | 3.336*** |
| Non-academic dimension | 4.99 [1.46] | 4.15 [1.49] | 5.552*** |
| Study programs and services | 4.57 [1.22] | 4.06 [1.14] | 4.292*** |
| Reputation | 5.33 [1.14] | 5.19 [1.00] | 1.230 |
| Academic dimension | 5.43 [1.08] | 5.21 [0.96] | 2.092** |

Note: [] denotes standard error of estimate. asterix ***, ** denote significance level of 1% and 5%, respectively

Table 4. Perceived service quality dimensions according to ownership status of the higher education institution

| Service dimension quality | Private HEI | Public HEI | t- test statistics |
|-----------------------------|----------------|----------------|--------------------|
| | N=107 | N=259 | |
| Access | 5.69 [1.19] | 4.87 [1.06] | -6.499*** |
| Non-academic dimension | 5.52 [1.34] | 4.15 [1.41] | -8.554*** |
| Study programs and services | 4.72 [1.31] | 4.13 [1.14] | -4.311*** |
| Reputation | 5.74 [1.07] | 5.05 [1.04] | -5.726*** |

| | | | |
|--------------------|----------------|----------------|-----------|
| Academic dimension | 5.64 [1.16] | 5.18 [0.95] | -3.922*** |
|--------------------|----------------|----------------|-----------|

Note: [] denotes standard error of estimate. asterix *** denotes significance level of 1%

4. Discussion and Conclusion

The results of this study have shown that students enrolled to the business programs at Croatian higher education institutions perceive service quality dimensions equally as their colleagues in other countries (Firdaus, 2006; Brocado, 2009; Brandon-Jones and Silvestro, 2010). Furthermore, the results are similar to those from other studies in Croatian higher education area (Marković, 2006; Legčević et al., 2012; Dužević and Čeh Časni, 2015). Five dimensions of service quality were extracted: academic dimension, reputation, access, non-academic dimension and study programs and services. Academic dimension and reputation were perceived as the most satisfying service quality attributes, followed by access. Study programs and services were the worst performing dimension. This dimension included items related to the quality of study programs and two items related to recreational and health services at the higher education institution. These service quality attributes require the most improvement. Therefore, the management of Croatian higher education institutions that provide business programs should review their study programs and define improvement strategies. One of the key issues regarding assessment of the study programs is employability of graduates. Since Croatia has high unemployment rates and unbalanced labour supply, students perceived study programs quality as insufficient.

The second part of the study examined differences in perceptions in regard to the following control variables: gender, student status (full-time or part-time), enrolled study program (vocational or university), and ownership status of the higher education institution that student attends (private or public). The perception of discrimination among female and male students is not found in this study, except for the non-academic dimension. Mukhatar et al. (2015) also found that perceived service quality is same among both genders. The results revealed statistically significant differences between male and female students regarding non-academic quality. Male students perceive non-academic quality better than female students. The results are similar to those from Sojkin et al. (2012) study who found that female students rated social conditions at higher education institution lower than male students, while they provided higher rating for the academic staff. Perceived service quality is same among all students, regardless their status at the higher education institution.

In regard to the type of the study, perceptions differ between students enrolled to vocational studies and students enrolled to the university studies for the following dimensions: academic dimension, non-academic dimension, access, and study program and services. Vocational study students gave higher ratings to all quality dimensions. Previous studies showed that individual and institutional characteristics influence perceptions of the quality at higher education institutions (Umbach and Porter 2002). In particular, student assessments differ based on the type of HEI, its size and its ownership status (Dužević and Čeh Časni, 2015; Umbach and Wawrzynski 2005).

As compared to private higher education institutions the service quality of public higher education institutions are on lower side. Students from private higher education institutions assessed all service quality dimensions better than students from the public institutions. Literature also suggest that students from private higher education institutions are more satisfied (Calvo-Porrall et al., 2013; Dužević and Čeh Časni, 2015; Mukhtar et al., 2015). According to Khaldi and Khatib (2014) students from private higher education institutions scored significantly higher in the dimensions of teacher support, involvement, task orientation, and cooperation than public institutions students. Previous studies showed that the environment at private higher education institution is more encouraging for student-faculty interactions and student involvement (Umbach and Wawrzynski 2005). In Croatian higher education context, private institutions are motivated to satisfy their students because they depend on student fees to sustain their business, while public institutions are mostly funded by the government and are less focused on their students (Dužević and Čeh Časni, 2015). Moreover, most of the private higher education institutions are young institutions with a small number of students where student and faculty interactions are easily maintained.

It is important to point out the limitations of this research. The results are limited to the Croatian higher education system, and are biased based on the specificities of the national higher education regulations. Use of subjective measures is also connected to some bias, but quantitative indicators and data are uninformative and insufficient for the purpose of this study.

This study provided insight into student perceptions of service quality and the effects of the individual and institutional aspects have on these perceptions. Study programs and services are the most critical dimension of service quality. Therefore, management of the higher education institution should regularly review their study programs and its compliance with labour market needs. The second service quality dimension that needs improvement is non-academic

dimension. It is related to the responsibilities of non-academic staff at the higher education institution. Management should find the way to motivate and engage its employees to provide high quality service and to fulfil students' requirements.

The findings of this study indicate that students' perceptions differ regarding the type of enrolled study program and ownership status of the higher education institution. In particular, students from private higher education institutions perceive provided service as more satisfying than students from public higher education institutions. The environment at private higher education institutions is more encouraging for academic staff – student interactions and student involvement (Umbach and Wawrzynski, 2005). Accordingly, management of the public higher education institutions should put more effort in development of better staff – student interactions.

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